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AUTHOR Burke, Richard R.
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ABSTRACT

Some research suggests reduced cooperation and collaboration among college faculty may result when annual pay increments are based on merit evaluations. Various theories and principles have been put forward to explain these effects. The overjustification theory suggests that extrinsically presented rewards become more salient than one's intrinsic interests and tend to diminish subsequent interest in the task. Equity theory suggests that when one works hard and receives high pay, production will be increased to reduce the inequity resulting from overcompensation relative to others. Those who perceive themselves as hard workers receiving low reward reduce productivity to achieve equity. The minimax principle suggests that salient extrinsic rewards cause people to maximize the chance of reward with minimum effort. Research has found, for example, that adults and children choose less difficult tasks in order to assure reward. Implications of this research are related to annual merit pay in colleges and universities. (Author/JD)

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Research on the Effects of Rewards:
Implications for Annual Merit Pay

Richard R. Burke
Department of Educational Foundations and Inquiry
Bowling Green State University

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Author Abstract
Richard R. Burke
Bowling Green State University

Abstract

Annual merit pay has been viewed as controversial at many colleges and universities, and some research suggests reduced cooperation and collaboration may result among colleagues when annual merit pay increments are based on merit evaluations. A great body of research has accumulated on the effects of reward, and much of this research can be related to the condition of college faculty working under merit pay programs. Research has found a number of detrimental effects of performance contingent rewards: performance may be impaired, interest may be diminished, and production focus may be significantly narrowed.

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Research on the Effects of Rewards:
Implications for Annual Merit Pay

Merit pay programs in schools, colleges, and universities may be conceived merely to reward appropriately those who deserve reward, but these programs represent something more than simple justice. I have quite often heard faculty members express the belief that intensive merit programs--those which reward annual increases exclusively contingent upon performance--cause divisiveness, discouragement, and unwholesome competitiveness. Barber and Klein (1983) argued that, "destructive competition is inevitable in a system designed to reward a few, while the majority go unrecognized for their efforts." (p. 247) Covington and Beery (1976) made the same point when they explained the deleterious effects of insufficient rewards: "Scarcity of rewards may cause people to become competitive, antagonistic, and uncooperative." (p. 38) A survey of more than 400 faculty members at Bowling Green State University in Ohio (BGSU, 1988) found that only five percent of respondents agreed that cooperation would result from an intensive (100%) merit program and 85 percent disagreed. Pittman (1987) referred to research that demonstrated reduced collaboration stemming from rewards. Subjects who were paid for collaboration actually spoke less to one another following the reward phase.

Aside from these problems of discouragement and competitiveness and the problem of reduced cooperation, a large body of research has accumulated which focuses upon a number of regrettable effects of performance-contingent rewards (Deci & Ryan, 1985; Lepper, 1983; Lepper & Green, 1978). These effects relate to impairments of

performance, subsequent interest, reduced productivity, and narrowing of production focus. Several theories or principles have been proposed to account for these effects.

The Overjustification Theory

A great amount of research on the various effects of rewards has focused on the effects of constraints extrinsic to the person. The idea is that when someone engages in a task of some interest, he or she will come to attribute performance motivation to an extrinsic source if it is viewed as controlling. The person's own intrinsic motivation for the task will be less salient than the offered reward as the reason for performing (Deci & Ryan, 1985). Subsequent performance without the controlling rewards will typically diminish. Activity originally perceived as an end in itself may come to be viewed as a means to an end after engaging in the activity to gain reward (Pittman, 1987).

In their classic initial exploration of this phenomenon, Lepper, Green, and Nisbett (1973) set up an intriguing experiment. First, they introduced an art activity into a preschool classroom and observed interaction which occurred with the activity in a free setting. Some children showed interest, and these children were then, in separate groups, told they could either play freely or play for a good player award. Some of the children in the first group were later presented good player awards unexpectedly. Several weeks later the experimenters returned to observe who was still playing with the art activity. The expected reward subjects played with the activity significantly less, but those in the control and unexpected reward groups showed no significant change. These same findings, that

extrinsically presented rewards undermine subsequent interest and performance, have been found with various age levels--children as well as adults (Lepper, 1983). Lepper stated "with the single exception of one study...it is of interest to note that in none of these studies has the use of extrinsic rewards, even performance-contingent rewards conveying salient evidence of one's normative superiority at the task, been shown to significantly increase later intrinsic interest in the activity." (Lepper, 1983, p. 291)

Deci and Ryan (1985) and Deci and Porac (1978) echoed the same conclusions specifically with respect to the use of monetary rewards. Studies reporting these results indicate that when subjects are rewarded with money to perform problem-solving activities, they later show significantly reduced interest in the activity.

Kruglanski, et al. (1975) found, further, that motivation is enhanced only when monetary payments are inherent to a task's content (as in a coin-toss game). Payments extrinsic to the activities in their study lowered subsequent interest. These studies have been conducted in various settings and have implications that have been applied to psychotherapy, education, work, and sports (Deci & Ryan, 1985; Lepper & Green, 1978).

Equity Theory

Adams (1963, 1965) proposed that one explanation for performance differences among individuals relates to the degree of compensation one receives relative to others. This idea suggests that those who work hard and receive high rewards will increase their productivity to reduce the inequity resulting from overcompensation relative to others. Those who perceive themselves to work hard but receive low

rewards will reduce this inequity by reducing their productivity. Folger, Rosenfield, and Hays (1978) studied this phenomenon using adults as subjects. They predicted and confirmed that high pay indeed led to greater productivity, but only among subjects working at a task they did not choose. Under high choice conditions, lower pay led to greater productivity. Further, under the high choice condition, high pay caused individuals to be less eager to return to the experimental tasks. Intrinsic motivation for a chosen task had been diminished.

Thus, if those tasks faculty perform for merit are chosen out of intrinsic interest, and if the individual receives more pay than others because of it, that individual may ultimately become less enamored with the work which initially led to high reward. One would certainly imagine that the tasks we are rewarded for are tasks that once interested us since we chose the field in which we work. A tendency, then, may develop whereby we come to view as work (in its less exciting and valued connotation) what was once something more like play. We come under the influence of reward salience to the point that we do just enough to gain the reward.

The Minimax Principle

Lepper (1983) reviewed several studies which demonstrated what some have called the "minimax" principle: where rewards for performing are salient, people attempt to maximize reward with minimum effort. Lepper cited several studies that demonstrated a marked tendency of subjects--both adults and children--to choose less difficult and less challenging tasks in order to assure reward.

Kruglanski, Stein, and Riter (1977) performed an experiment in which adult subjects were placed in one of three performance groups:

1) a time-contingent group, 2) a standard-contingent group, and 3) an output-contingent group. Thus, rewards were offered for finishing on time, for meeting a quality standard, or for greater quantity in production. All subjects were aware that the expectations of the other subjects applied to them also but were not to be rewarded. All groups yielded the same results: subjects concentrated on what they were to be paid for and neglected the other expectations. These subjects minimized their performance to maximize their rewards.

An obvious relation of this work to college merit programs would suggest that faculty members might concentrate most profitably on performance tasks most likely to result in rewards and with the least effort and risk. Classroom teaching compared to many other tasks is a highly complex undertaking with uncertain results and questionable evaluation procedures. Consequently, faculty might better concentrate on simpler work with more probable gain. In the survey cited earlier (BGSU, 1988), most faculty indicated that more merit should be provided for teaching than for research, but that the merit program unquestionably favored research. While research is usually not a simple activity, outcomes here may be more under our control than in teaching.

Conclusion

The growing body of research on the effects of rewards is unequivocal in its findings. With extremely few exceptions, rewards tend to diminish intrinsic interest for contingent tasks, rewards tend to promote low-difficulty task choice, and rewards tend to impair performance. If merit programs do not cause similar detriments, it may be because merit pay increases are so remote from the time of

performance that the reward aspect of the situation is not salient. Yet, with the constant discussions one hears regarding merit, and with the record keeping one is required to do if he or she hopes to gain merit, it is difficult to imagine that merit for performance is far from our minds as we work. Further research on self-determination and rewards might focus specifically on annual merit pay programs. Is it possible that such programs could cause faculty to avoid complex research problems in favor of simple problems more likely to result in reward? Might faculty come to find that they are less interested in those activities for which they have been rewarded as rewards become less and less effective? Might younger faculty members be affected differently from more experienced faculty? These questions, and many others, deserve attention in future research.

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